**TAS FACULTYASSESSMENT TASK NOTIFICATION**

**Subject: Technology (Mandatory)**

**Task: STEM Fundamentals Report**

**Stage: 5 Year: 9**

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| TOPIC/MODULE/UNIT OF WORK: |

FiFi Mechatronics Collaborative Design Report

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| WEIGHTING (AS PER ASSESSMENT SCHEDULE): |

25%

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| DUE DATE: |

Term 3, Week 10

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| TIME ALLOWED: |

10 weeks

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| OUTCOMES: |

5.1.1, 5.4.1, 5.4.2, 5.6.2, 5.8.1

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| OUTLINE OF TASK: |

During the Mechatronics Find It Fix It (FiFi) task, students complete an engineering report that reflects on the science, technology, engineering and mathematics explored during the project. The reports are assessed as follows:

* Student describes sensors and how they are used in mechatronic systems.
* Students describe the problems they solved during the project that were solved using logical systems or mathematical analysis.
* Provides evidence of other team members working mathematically or scientifically.
* Students describe the contribution their solution would make to solve local problems.

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| ADDITIONAL INFORMATION & CAMPUS ASSESSMENT POLICY: |

This is a formal assessment item. Absence due to illness, funeral, family situation, etc. must be supported by a medical certificate, presented to the Head Teacher on the first day of your return to school, irrespective of your timetable for this subject. You must be prepared to attempt the task on the first day of your return to school – i.e. when your medical certificate expires.

**Penalties for unacceptable late submission and non-attempt of assessment** are as follows: One day late- 10% of total mark; Two days late- 20% of total mark; Three days late- 30% of total mark; Four days late- 40% of total mark; Five days late- 50% of total mark; More than five days late- mark of zero. If the work has not been submitted after a week the student/s involved will re-attempt the task in order to meet course outcomes.

**If plagiarism is evident an automatic mark of zero will be given and the student/s involved will re-attempt the assessment.**

If the assessment is a serious non-attempt or non-attempt noted by both the Teacher and Head Teacher the student will receive zero and will re-attempt the assessment in order to meet course outcomes. Any form of malpractice and misadventure will also result in parental contact by the respective teacher and student/s involved in the **malpractice may be further supported through the ‘Leichhardt Way’.**

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| ASSESSMENT CRITERIA: |

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| Outcome | Mark | A – Outstanding (5) | B – Highly Developed (4) | C – Sound (3) | D – Basic (2) | E – Limited (1) |
| 5.1.1 develops ideas and explores solutions to STEM problems. |  | Evaluates 4+ sensors (Mindstorm and other) explored during the FiFi Project. | Analyses 3+ sensors (Mindstorm) explored during the FiFi Project. | Describes 2+ sensors (Mindstorm) explored during the FiFi Project. | Identifies 2 sensors (Mindstorm) explored during the FiFi Project. | Identifies, but does not describe the sensors explored in the project. |
| 5.4.1 uses mathematical, scientific and graphical methods related to technology and engineering. |  | Evaluates 4+ challenges faced during the FiFi project that were solved with mathematical solutions or programming. | Analyses 3+ challenges faced during the FiFi project that were solved with mathematical solutions or programming. | Describes 2+ challenges faced during the FiFi project that were solved with mathematical solutions or programming. | Identifies 2-3 challenges faced during the FiFi project that were solved with mathematical solutions or programming. | Does not identify challenges solved with mathematical solutions or programming. |
| 5.4.2 develops skills in using mathematical, scientific and graphical methods whilst working as a team. |  | Analyses evidence of scientific investigation and mathematical analysis conducted by all team members. | Explains evidence of scientific investigation and/or mathematical analysis conducted by 2+ team members. | Describes evidence of scientific investigation and/or mathematical analysis conducted by a team member. | Identifies evidence of scientific investigation and/or mathematical analysis conducted by a team member. | Does not provide clear evidence of team members’ work. |
| 5.6.2 will work individually or in teams to solve problems in STEM contexts. |  | Analyses their contribution to the team and the roles of others in solving the FiFi challenge. | Describes their contribution to the team and the roles of others in solving the FiFi challenge. | Identifies their contribution to the team and the roles of others in solving the FiFi challenge. | Identifies their contribution to the team in solving the FiFi challenge. | Does not clearly identify the roles of the team. |
| 5.8.1 understands the contribution of STEM disciplines to the economic well-being of nations. |  | Evaluates costing and how the FiFi solution could be used in different places around the world. | Analyses costing and how the FiFi solution could solve a state or national problem. | Describes costings and how the FiFi solution could solve local problems. | Describes how the FiFi solution could solve local problems. | Identifies, but does not describe, how the FiFi solution might be used. |

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| SAMPLES (INDICATING DIFFERING STANDARDS OF ACHIEVEMENT): |  |

A scaffold will be provided and examples of ALARM reports will be run through in class. OneNote contains examples of *outstanding* reports and scaffolds for report writing.